

Montana DEQ Forest Fire Smoke Advisory

August 18, 2007

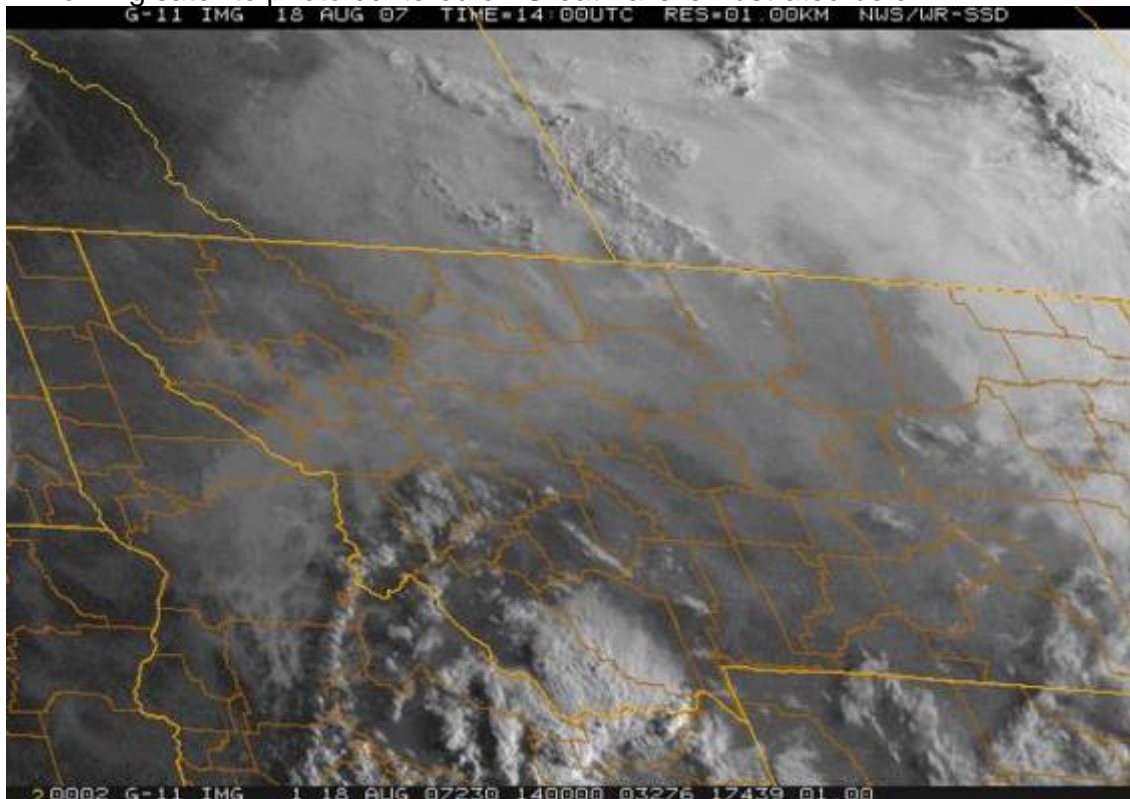
10:00 AM Saturday

FORECAST:

The thick layer of residual smoke that was trapped above northwestern Montana yesterday has finally moved off to the east taking several days worth of smoke with it. Smoke impacts along the Front Range and the western plains have increased but many areas of western Montana are much improved with inversions keeping the smoke aloft away from the surface. The exception is the valleys with active fires like the Bitterroot where unhealthy levels of smoke are being recorded this morning.

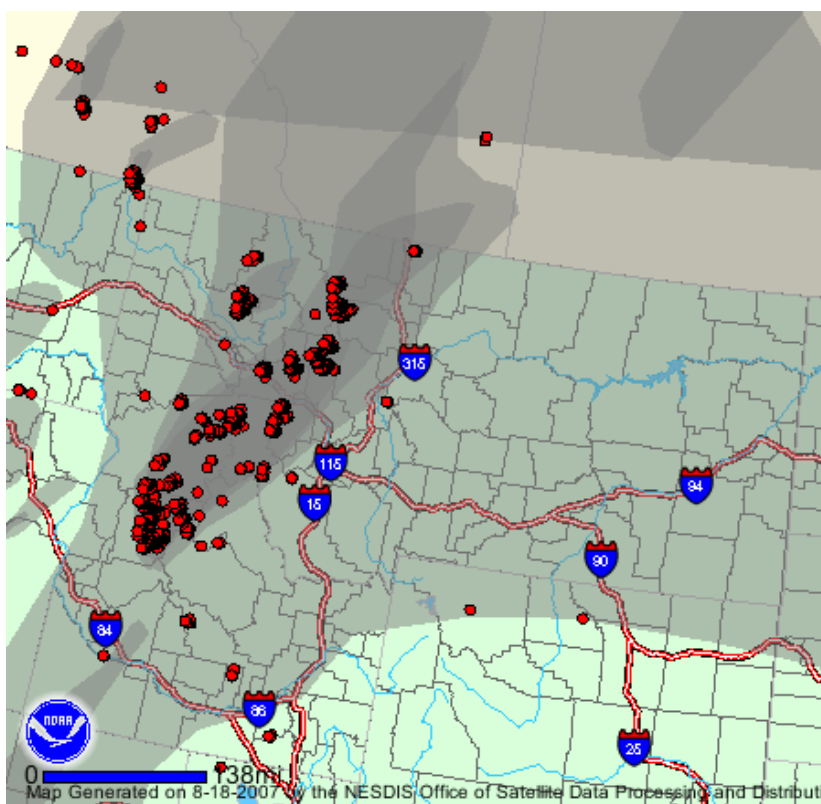
The stagnant conditions that have been producing the high levels of smoke in the western valleys the past week will be moderating over the next couple of days as a trough along the coast starts to work into the state. This will produce stronger winds and better dispersion Saturday and Sunday and will bring in much fresher air by Monday along with a good chance of wetting rains in some areas. Much stronger winds ahead of this system will likely produce strong plume driven fire activity. Red Flag warnings have been posted for western Montana today and local impacts from nearby fires will be an issue in many areas today. Smoke will mix down later this morning across the state and intermittent heavy smoke impacts are likely under the thickest parts of the plume of smoke aloft for a few hours. Overall transport winds will be from the southwest switching to the west by Sunday. This leaves the Bitterroot Valley, the Flathead Valley, Front Range area, and the Big Timber area downwind of large fire activity today and tomorrow. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the

analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

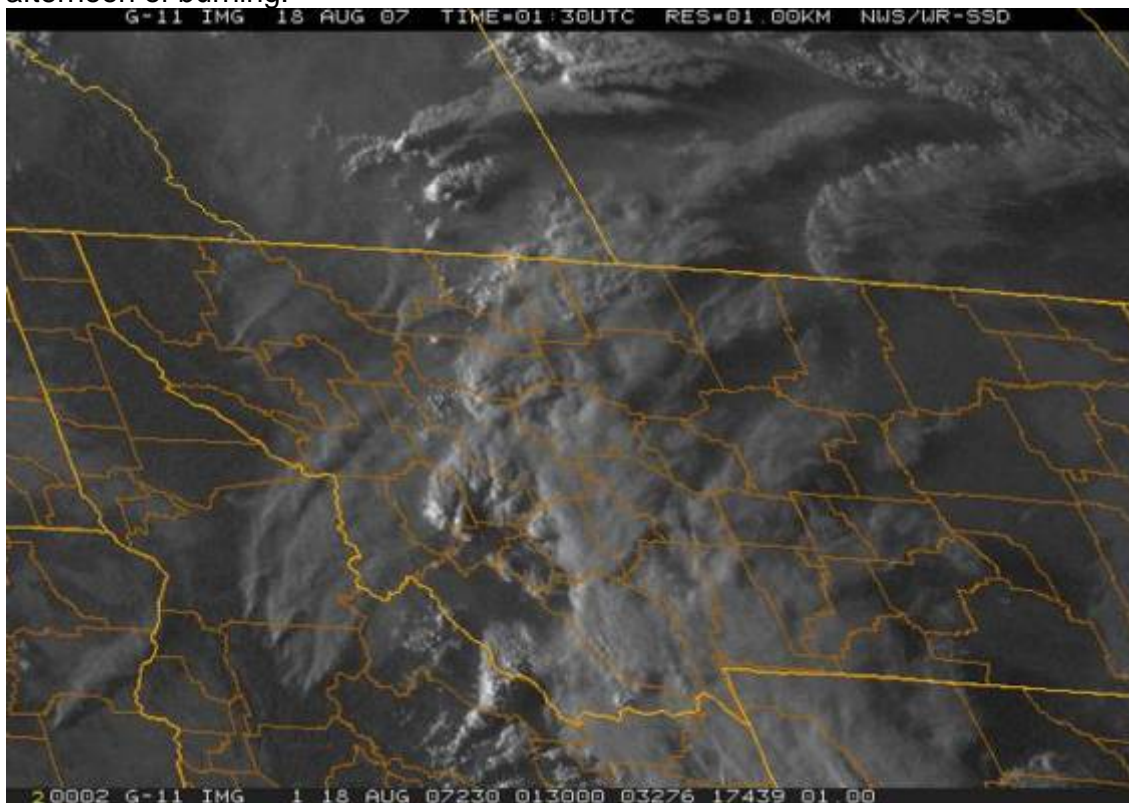


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

This satellite photo taken at 7:30 PM last night shows the plumes of smoke from fires in Oregon, Idaho, and Montana stretching out to the northeast due to an active afternoon of burning.



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DISCUSSION:

Hamilton is still at unhealthy, but Missoula has improved to unhealthy for sensitive and Whitefish and Kalispell have improved dramatically to moderate at this time. Smoke along the Front Range has Cut Bank and Choteau at unhealthy for sensitive and Great Falls and Helena at moderate. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the visibility guidelines to determine current conditions. Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility to guide activity decisions as the situation changes.

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Meteorologist

Montana Department of Environmental Quality

Updated 10 AM August 18, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Hamilton T24
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Missoula T8 Cut Bank Vis(8) Choteau T24
<u>MODERATE</u>	Kalispell T8 Whitefish T8 Helena T8 Great Falls Vis(6)

T1(x)	One-hour TEOM or BAM value (number of values)
T8(x)	Eight-hour average TEOM or BAM value(number of values)
T24	24 hour average TEOM or BAM value
Vis(x)	Visibility value(number of hours)
Vis(am/pm)	Visibility value from twice/day reporting stations
(est)	estimate